V. *A Letter from* Mr. Martin Hartop *at* Naples, *to the Publiſher. Together with an Account of the late Earthquake in* Sicily.

Worthy S I R,

I Have ſent you, as you deſir'd, all the Account which has yet ſeen the Light of the late Earthquake in *Sicily*. There was nothing that ever I could hear of particular in it, and therefore you can expect no great matter of Reflection upon it. However, to comply with your Commands, I ſend you my general Thoughts of this and ſuch like *Phænomena*.

Firſt, It ſeems highly probable that theſe Tremblings of the Earth proceed from the ſame incens'd matter, which finding a way at other times through the *Mongibello*, has ſo furiouſly broken out in Smoak and Fire: This appears by the Tragedy of *Catania*. Now you muſt know the Eruptions of theſe Mountains are of two ſorts; the one not ſo very violent as to diſturb much the adjacent Country, and this happens once in two or three Months, and laſts three or four days. The other is more furious and of longer Continuance, and is obſerv'd here at *Naples* to happen to Mount *Veſuvio* once in about Eighty Years, as I heard the ingenious Mr. *Peccacio* ſay. Of theſe, the laſt, which as well as I remember, he ſaid was in 1632. was ſo very violent, that by the beſt of his Obſervation it caſt the Rocks three Miles into the Air. Now from the burning or not burning of this Hill, *Naples* (and without doubt the ſame holds in *Sicily*) calculates its ſafety or danger of Earthquakes: For without doubt the matte is perpetually burning under the Mountain; and thoſe vaſt Clouds of Smoak which daily iſſue out of the top, if the Cavity happen by any Rock or

inward Alteration to be ſtopt, muſt deviate through other Paſſages under ground, heaping up continually Magazines for a future Calamity. Now this combuſtible matter ſeems to me to be nothing but Nitre mixt with ſome other Minerals and Sulphur. He that has ſeen the way of making Salt of *Tartar* by Deflagration, where you mix an equal quantity of pulveriz'd Nitre, has ſeen an exact Type of theſe burning Hills: For after each ſpoonful you put into the burning Crucible, ariſes firſt a black thick Smoak, after which the fired Mineral boils up, as if it would over run the top of the Crucible.

This I take to be the matter. But, 2*ly*, How this Motion of the Earth is perform'd is not ſo eaſily explicable, eſpecially if one conſiders, that the Motion of the Earth is not from the Perpendicular, but Horizontal *Verte*; 'tis a Vibration ſo quick, that it cracks the Glaſs in the Windows: 'Tis diſputable whether the Reciprocations of a Lute-ſtring are more frequent. Now when the Vibrations are ſo quick, and the Body mov'd ſo great, the Motion muſt be prodigiouſly violent, and by conſequence the Cauſe, which I take to be nothing elſe but the aforeſaid Vapours incens'd. We obſerve the Thunder, which is the effect of the trembling of the Air, caus'd by the ſame Vapours diſpers'd through it, and encountring one the other, has force enough to ſhake our Houſes. And why their may'nt be Lightning and Thunder under ground in ſome vaſt Repoſitories there, I ſee no reaſon, eſpecially if we reflect, that the matter which compoſes the noiſy Vapour above us, is in much larger quantities to be found under ground. Now if you ask me how this Horizontal Trembling is perform'd, (for ſuch doubtleſs it is, as appears by the Cracks in the Earth, which they ſay, are to be found now all over *Sicily*) I can attribute it to nothing elſe but the furious Paſſage of the incens'd matter from one Grotto to another: For 'tis very probable theſe are continued in ſome parts

parts of the Earth for ſeveral Leagues together: Witneſs your laſt Earthquake about four or five year ago, which was felt, (with little difference as to time) in *England* and *Ireland*. Another Confirmation of this, is, the manner theſe trembling Fits are perform'd; which is not all of a ſuddain, like that of Gunpowder in a Mine, but is ſmall at firſt, afterwards gradually more terrible, like a growing Tempeſt. A Third may be, the Obſervation of ſome here in *Naples*, that when Mount *Veſuve* ceaſes to burn, the *Sulfaterra* ſends out its Fumes more violently, & *vice verſa*. Now this *Sulfaterra* is a Hill near *Puzzolo*, as diſtant from *Naples* on the one hand as the Hill *Veſuvio* is on the other; ſo that tis more than probable *Naples* ſtands upon a burning Arch, through which, as a Pipe, theſe two furious Neighbours do reciprocally receive the aboveſaid Exhalation. This ſeems to me a growing Evil to this wealthy and populous City, and what may poſſibly in time make good the Prediction of *Sanazarius*, who was born here.

Et te, quis putet hæc? altrix mea, durus Arator
Vertet, & Urbs, dicet, hæc quoque clara fuit.

Tours, &c.